KAJIAN PENCAMPURAN TANAH CMTF (*CENTRAL MUD TREATING FACILITY*) DAN COCS (*CRUDE OIL CONTAMINATED SOIL*) DENGAN METODE BIOREMEDIASI PADA SBF 8D-58 (*SOIL BIOREMEDIATION FACILITY*) DI PT.CHEVRON PACIFIC INDONESIA

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INTISARI

Penelitian dilakukan di SBF 8D-58 **(***Soil Bioremediation Facility*) PT.Chevron Pacific Indonesia**,** Kecamatan Minas, Kabupaten Siak, Propinsi Riau. Bioremediasi adalah salah satu metode untuk mengaplikasikan prinsip-prinsip biologi untuk menghilangkan bahan-bahan kimia berbahaya dari air tanah, tanah dan lumpur.

Untuk itu dilakukan dengan mencampurkan tanah CMTF dengan COCS dengan perbandingan 1:3 pada lokasi SBF 8D-58 (*Soil Bioremediation Facility*). Angka perbandingan ini didapat dari hasil penelitian KLH Provinsi Riau pada skala laboratorium.

CMTF ialah sebuah fasilitas pengolah limbah lumpur yang menghasilkan tanah pada proses pengolahannya,namun tanah tersebut belum bisa di buang dan harus diolah kembali. Selama ini PT.CPI memanfaatkan tanah CMTF sebagai bahan dasar pembuatan paving blok, namun seiring berjalannya waktu tanah tersebut di uji coba kedalam percobaan bioremediasi.

Tujuan dari penelitian ini adalah untuk mengetahui pengaruh penambahan tanah CMTF kedalam pencampuran COCS dengan menggunakan proses teknik l*andfarming* dan mengetahui penurunan *Total Petroleum Hydrocarbon* (TPH) sampai dibawah 1%, sesuai dengan KEPMEN No.128 tahun 2003.Dalam penelitian ini parameter yang diukur ialah *Total Petroleum Hydrocarbon* (TPH) dan pH.

Pada akhir penelitian dapat disimpulkan bahwa proses bioremediasi dengan mencampurkan tanah CMTF dan COCS dengan teknik *landfarming* dapat menurunkan Total Petroleum Hydrocarbon (TPH) dibawah 1% dan penambahan tanah CMTF kedalam pencampuran COCS dengan menggunakan proses teknik landfarming dapat mempengaruhi hasil dari proses bioremediasi

Kata kunci : Bioremediasi, COCS (*Crude Oil Contaminated Soil),* tanah CMTF

STUDY OF MIXING SOIL CMTF (CENTRAL MUD TREATING FACILITY) AND COCS (CRUDE OIL CONTAMINATED SOIL) WITH BIOREMEDIATION OF LANDFARMING TECHNIQUE AT SBF 8D-58 (SOIL BIOREMEDIATION FACILITY) PT CHEVRON PACIFIC INDONESIA, MINAS, RIAU

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ABSTRACT

The research was conducted at SBF 8D-58 (Soil Bioremediation Facility) PT.Chevron Pacific Indonesia, District Minas, Siak regency, Riau Province. *Bioremediation* is one of methods to applied biology principal to omit dangerous chemical substance from soil water, soil and mud.

Bioremediation process conducted with mixing the *COCS (Crude Oil Contaminated Soil))* and *CMTF (Central Mud Treating Facility)* by 1:3 ratio at SBF 8D-58 (Soil Bioremediation Facility. The comparative figures obtained from the research of KLH Riau Province in laboratory scale.

CMTF is the sewage sludge processing facilities that produce waste nevertheless it can not be disposed into the environment, we have reworked before the waste being returned to the environment. All this time, PT. Chevron always utilizing the waste as a raw material manufacture of paving block,but as time goes on, the waste carried a trial to bioremediation activities.

The purpose of this research was to determine the effect of adding CMTF and COCS at landfarming technique and knowing the decrease of Total Petroleum Hydrocarbon (TPH) to below 1%, according to KEPMEN No. 128 year 2003. This research was conducted in a large-scale experimental as pilot project. In this experiments we carried out mixing the soil with COCS and CMTF with 1:3 mixing ratio at each processing cell.. The measured parameter on this research is the Total Petroleum Hydrocarbon (TPH) and pH and also used the media controller.

The conclution is, the process by mixing soil bioremediation CMTF and COCS with landfarming techniques can decrease the Total Petroleum Hydrocarbon (TPH) below 1% and the addition of soil CMTF into the mixing process using landfarming technique can affect the outcome of the process of bioremediation.

Key words : *Bioremediasi, COCS (Crude Oil Contaminated Soil),the waste of CMTF*